signaling complexity. The use of a common channel DSCH by different connections at successive times permits, in particular, good correspondence to the high data rate and high dynamics of the data rate of some connections V1, V2.

The signaling means determine TFCI values for the selected combinations of transport formats TF for the services S1, S2, S3 and perform in-band signaling of the transport formats TF. In the separate channel FACH, the mapping specification for TFCI value to combination of transport formats TF and used channels DCH, DSCH is signaled.

The layer model shown in Figure 2 shows the protocols of the radio communication system divided into three layers.

Layer 1: physical layer for describing all the functions for bit transmission via a physical medium (e.g. coding, modulation, transmission power monitoring, synchronization etc.),

Layer 2: data link layer for describing the mapping of data onto the physical layer, and monitoring thereof,

Layer 3: network layer for controlling the resources of the radio interface.

Layer 3 stipulates the TFCS for a connection, while layer 2 selects a combination (of a TFC) which is signaled in-band using a TFCI, as shown later.

The parameter exchange between layers 1 and 2 supports the functions of transferring frames with data for layer 2 via the radio interface and of displaying the status of layer 1 to higher layers. The parameter exchange between layers 1 and 3 supports monitoring of the configuration of the transmission in layer 1 and generates system information relating to layer 1.

In this case, the mapping of the data for various connections S onto a common physical channel Phy CH and the signaling

of the allocation of a common channel DSCH correspond to the interaction of layers 1 and 2.

Figures 3 and 4 show the need for transport formats TF to be signaled for currently transmitted services.

Figure 3 shows, as an illustration of function, a coding and multiplex unit which maps data from a plurality of data channels DCH (which each correspond to the data for a service S1, S2, S3) onto a coded common transport channel CCTrCH. In this context, mapping is a specification governing the bit pattern which is to be used for entering the data into a serial data sequence. A demultiplexer/allocation means distributes the data for the coded common transport channel CCTrCH over a plurality of physical channels Phy CH. The physical channels Phy CH are thus constantly used to transmit data for a plurality of services S1, S2, S3 in each case. A physical channel Phy CH is not allocated to one service S1 or S2 or S3 alone, but rather is allocated to the coded common transport channel CCTrCH with all its services S1, S2, S3.

Since the reception end needs to reconstruct this mapping and needs to read the data from the physical channels Phy CH and present them again in separate transport channels DCH for the services, signaling is necessary. This signaling in the form of TFCI values depicts the currently used combination of the transport formats TF for the services and, as shown later, also the current allocation of a common channel or of a plurality of common channels DSCH. It has been agreed at connection setup which combinations are permitted for the connection (TFCS).